Correspondence

Letters should not exceed 400 words and should be typed double spaced (including the references) and be signed by all authors.

TO *THE EDITOR. Genitourinary Medicine*

Amoxycillin, augmentin, and metronidazole in bacterial vaginosis associated with *Gardnerella vaginalis*

Sir,

Gardnerella vaginalis is often recovered from the vaginal secretions of women with bacterial vaginosis, yet its exact pathogenic role remains uncertain. It may well be an indicator of a disturbed bacterial environment in which lactobacilli are suppressed and replaced by other organisms, largely anaerobic bacteria. Dr Hill has recently reported in this journal that the clinical signs of bacterial vaginosis are often related to products of anaerobic bacterial metabolism, which may be detected by chromatography.[1]

We have evaluated the efficacy of amoxycillin, augmentin, and metronidazole in bacterial vaginosis in an attempt to assess the relative importance of anaerobes and *Gardnerella vaginalis*. Ampicillin and amoxycillin are highly active against *G vaginalis*, the MIC_{50} of ampicillin being less than 0·6 mg/l,[2] yet the clinical effectiveness of ampicillin in bacterial vaginosis is limited.[3] Metronidazole is effective in most patients with bacterial vaginosis, though its clinical success is not consistent with its modest in vitro activity against *G vaginalis*. The hydroxymetabolite is more active than the parent compound, though serum concentrations after usual doses do not exceed its MIC for *G vaginalis*.[4] The clinical effectiveness of metronidazole has led to doubt of the role of anaerobes in bacterial vaginosis. Augmentin is active in vitro against both anaerobes and *G vaginalis*, yet its clinical efficacy in bacterial vaginosis is not established.

We studied 28 women with clinical bacterial vaginosis as defined by Amsel and colleagues.[5] *G vaginalis* was isolated from vaginal secretions in every case, and cultures for *Neisseria gonorrhoeae, Candida* spp, *Trichomonas vaginalis*, and chlamydiae excluded other causes of genital infection. Women in three treatment groups received amoxycillin (500 mg by mouth every eight hours), augmentin (one tablet containing 250 mg amoxycillin and 125 mg clavulanic acid) by mouth every eight hours, or metronidazole (400 mg) by mouth every 12 hours. Clinical cure and eradication of *G vaginalis* was achieved in five out of eight (63%) women given amoxycillin, six out of six given augmentin, and 13 out of 14 (93%) given metronidazole. The results in this small group of patients are consistent with the known efficacy of metronidazole in bacterial vaginosis and the inferior reponse to ampicillin reported previously.[3] The clinical efficacy of augmentin and its activity against *G vaginalis* was comparable with that of metronidazole, and suggests that neither the suppression of lactobacilli by amoxycillin nor the unsatisfactory penetration of amoxycillin into vaginal secretions account for the limited effectiveness of this antibiotic in baterial vaginosis; its inactivity against most vaginal anaerobes is a more likely explanation.

Culture of vaginal secretions for *G vaginalis* and anaerobes is of limited value for routine diagnosis of bacterial vaginosis. Recovery of anaerobes varies considerably from centre to centre, and in our study were isolated in only one third of patients with bacterial vaginosis associated with *G vaginalis*. Nevertheless, the effectiveness of metronidazole and augmentin reinforces doubt of the role of anaerobes in this disorder. Though augmentin inhibits both anaerobic bacteria and *G vaginalis* and was clinically effective in this small study, metronidazole may be preferred because of its narrower range, inactivity against commensal lactobacilli, and lower tendency to promote candidal colonisation.

Yours faithfully,

*Jane Symonds**

* Department of Microbiology,
Russells Hall Hospital,

A K Biswas†

† Department of Genitourinary Medicine,
Guest Hospital,
Dudley, West Midlands

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2. Ralph ED, Austin TW, Pattison LM, Schieven BC. Inhibition of *Haemophilus vaginalis (Corynebacterium vaginale)* by metronidazole, tetracycline and ampicillin. *Sex Transm Dis* 1979;**6**:199-202.
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TO THE EDITOR, *Genitourinary Medicine*

Comparison of direct immunoflorescence and cell culture detecting *Chlamydia trachomatis*

Sir,

I read with great interest the paper by Foulkes *et al (Genitourin Med* 1985;**61**:255-7). If we take the accuracy of their cell culture as being near 100%, which does not seem to be unreasonable, then the *sensitivity* of the direct immunoflorescence test in their hands was 90% and the *specificity* 87%. It is also encouraging to note that they followed the manufacturer's recommendations in taking a cut off point of 10 chlamydial bodies in declaring results to be positive.

Some of your readers may remember the spring meeting in Manchester of 1984 when I was trying to explain to some of the contributors, who were taking the cut off point as one chlamydial body, that they really must evaluate their test in terms of its sensitivity and specificity. If you agree with Youden,[1] then the direct immunofluorescence test for chlamydiae is not a very useful addition to the diagnostic range in genitourinary medicine.

We really ought not to rest in the specialty until the predictive value of a *negative* test is 100%; anything less than this and we should be dissatisfied, whatever pathogen we are looking for. In any case, it seems to be quite ridiculous to flaunt the manufacturer's guidelines on the performance of a test unless you are able to apportion some statistical value to your results. Foulkes and colleagues are to be congratulated.

Yours faithfully,

M D Talbot

Department of Genitourinary Medicine,
Royal Hallamshire Hospital,
Sheffield

Reference

1. Youden WJ. Index for rating diagnostic tests. *Cancer* 1950;**3**:32-5.